

LISTING OF CLAIMS

This listing of claims will replace all prior versions, and listings, of claims of the application:

Claim 1 (Currently Amended) An information processing apparatus, comprising:

storage means for storing raw data and time axis data related to said raw data and stored in said storage means by association with said raw data;

thumbnail icon generating means for generating a thumbnail icon representing said raw data read from said storage means;

spiral period setting means for setting a spiral period of a virtual spiral based upon a unit of time selected from a plurality of units of time, each of said plurality being repeated in accordance with a predetermined unit time pattern;

spiral axis setting means for setting a spiral axis of said virtual spiral ~~based upon said predetermined unit time~~ that represents a vicissitude of said unit of time; and

thumbnail icon array displaying means for displaying said thumbnail icon in an array on said virtual spiral based upon said time axis data associated with said raw data represented by said thumbnail icon.

Claim 2 (Previously Presented) The information processing apparatus according to claim 1, said information processing apparatus further comprising:

representative thumbnail selecting means for selecting one of a plurality of thumbnail icons displayed in said array on said virtual spiral as a representative thumbnail icon; and representative thumbnail icon array displaying means for displaying said representative thumbnail icon selected by said representative thumbnail selecting means in said array on said virtual spiral.

Claim 3 (Previously Presented) The information processing apparatus according to claim 1, said information processing apparatus further comprising:

spiral layer synthesizing means for synthesizing a plurality of spiral layers each including said virtual spiral, said spiral axis, and said thumbnail icon; and

synthesized layer displaying means for displaying a synthesized layer produced by said spiral layer synthesizing means.

Claim 4 (Currently Amended) The information processing apparatus according to claim 1, further comprising:

thumbnail icon extracting means for extracting a specific thumbnail icon from a plurality of thumbnail icons displayed in said array based on said time axis data based upon a ~~predetermined cycle~~ attribute data of said raw data; and

data outputting means for outputting said raw data represented by said specific thumbnail icon extracted by said thumbnail icon extracting means.

Claim 5 (Previously Presented) The information processing apparatus according to claim 1, wherein said unit time corresponding to said spiral period set by said spiral period setting means is one of a month unit and a one year unit including a spring, a summer, an autumn, and a winter.

Claim 6 (Cancelled).

Claim 7 (Previously Presented) The information processing apparatus according to claim 2, wherein said representative thumbnail icon array displaying means displays said thumbnail icon as a semitransparent display.

Claim 8 (Previously Presented) The information processing apparatus according to claim 3, further comprising visual point moving means for moving a visual point of said spiral layer displaying said virtual spiral, said spiral axis, and said thumbnail icon.

Claim 9 (Previously Presented) The information processing apparatus according to claim 8, wherein said visual point moving means automatically moves said visual point of said spiral layer along a time axis.

Claim 10-14 (Cancelled).

Claim 15 (Currently Amended) A computer graphic display program storage method comprising the steps of:

storing raw data and time axis data related to said raw data in storage means by association with said raw data and reading said raw data;

generating a thumbnail icon representing said raw data read in said storage step;

setting a spiral period of a virtual spiral based upon a unit of time selected from a plurality of units of time, each of said plurality being repeated in accordance with a predetermined unit time pattern;

setting a spiral axis of said virtual spiral ~~based upon said predetermined unit time~~ that represents a vicissitude of said unit of time; and

displaying said thumbnail icon in an array on said virtual spiral based upon said time axis data associated with said raw data represented by said thumbnail icon.

Claim 16 (Previously Presented) The computer graphic display program storage method according to claim 15, further comprising the steps of:

selecting a specific thumbnail icon of a plurality of thumbnail icons displayed in said array on said virtual spiral as a representative thumbnail icon; and

displaying said representative thumbnail icon selected in said representative thumbnail icon selecting step in said array on said virtual spiral.

Claim 17 (Previously Presented) The computer graphic display program storage method according to claim 15, further

comprising the steps of:

synthesizing a plurality of spiral layers each including said virtual spiral, said spiral axis, and said thumbnail icon; and

displaying one of said plurality of synthesized layers produced in said spiral layer synthesizing step.

Claim 18 (Currently Amended) The computer graphic display program storage method according to claim 15, further comprising the steps of:

extracting a specific thumbnail icon from a plurality of thumbnail icons displayed in said array based on said time axis data based upon a predetermined cycle attribute data of said raw data; and

outputting said raw data represented by said specific thumbnail icon selected in said thumbnail icon extracting step.

Claim 19 (Previously Presented) The computer graphic display program storage method according to claim 15, wherein said unit time corresponding to said spiral period set by said spiral period-setting step is one of a month unit and a one year unit including a spring, a summer, an autumn, and a winter.

Claim 20 (Cancelled).

Claim 21 (Previously Presented) The computer graphic

display program storage method according to claim 16, wherein in said representative thumbnail icon array displaying step said representative thumbnail icon is displayed as a semitransparent display.

Claim 22 (Previously Presented) The computer graphic display program storage method according to claim 17, further comprising a step of moving a visual point of said spiral layer displaying said virtual spiral, said spiral axis, and said thumbnail icon.

Claim 23 (Previously Presented) The computer graphic display program storage method according to claim 22, wherein said visual point moving step automatically moves said visual point of said spiral layer along a time axis.

Claims 24-28 (Cancelled).

Claim 29 (New) The information processing apparatus according to claim 1, wherein said spiral axis setting means sets a direction in XYZ space and a slope of said spiral axis.

Claim 30 (New) The computer graphic display program storage method according to claim 15, wherein said spiral axis setting step sets a direction in XYZ space and a slope of said spiral axis.